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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,810	05/15/2001	Gerald R. Malan	UOM0208PUSP	1546

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EXAMINER

AILES, BENJAMIN A

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/855,810	<b>Applicant(s)</b> MALAN ET AL.	
	<b>Examiner</b> Benjamin A Ailes	<b>Art Unit</b> 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_ ✓
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2142

### DETAILED ACTION

1. Claims 1-20 have been examined.

#### ***Priority***

2. This application claims priority to U.S. provisional applications: 60/231,480, filed September 8, 2000, 60/231,481, filed September 8, 2000, and 60/231,479, filed September 8, 2000. Thus, the effective filing date for the subject matter defined in the pending claims in this application is 09/08/2000.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6, 8-11, 14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soha (U.S. 4,817,080), hereinafter referred to as Soha, in view of Smith, R. N. et al. ("Operating Firewalls Outside the LAN Perimeter"), hereinafter referred to as Smith.
5. As per claims 1 and 9, Soha discloses a method of collecting statistics at a plurality of measurement points (col. 4, lines 23-31 and lines 41-43). Soha discloses the use of multiple monitor units in order to collect statistics and keep track of traffic flow (col. 4 lines 37-45). Soha discloses a method of statistics collection, but is silent on the statistics analysis in order to reconstruct a path taken by undesirable network traffic. However, Smith discloses a method of blocking undesirable network traffic (p. 496, col.

Art Unit: 2142

2, paragraph 4, lines 1-10). The reconstruction of a path taken by undesirable network traffic through the network is considered a method used to block unwanted traffic from getting to its destination. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to block undesirable network traffic based on network statistics. It is for this reason that one of ordinary skill in the art would have been motivated to implement Smith's network unwanted traffic blocking method using a statistics collection mechanism disclosed by Soha.

6. As per claims 2 and 10, in accordance with claims 1 and 9, respectively, Soha discloses a network, but is silent on the blocking of undesirable network traffic. However, Smith discloses the blocking of undesirable network traffic within a computer network (p. 496, col. 2, para. 4, lines 1-10). One with ordinary skill in the art at time of applicant's invention would have found it advantageous to use the method disclosed by Smith in accordance with the network disclosed by Soha in order to block undesirable network traffic. It is for this reason that one of ordinary skill in the art would have been motivated to use the network traffic blocking method disclosed by Smith in accordance with the network disclosed by Soha.

7. As per claims 3 and 11, in accordance with claims 1 and 9, respectively, Soha discloses a network, but is silent on the use of a router. However, Smith discloses the use of routers in the forwarding infrastructure (p. 493, col. 2, para. 2). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a router configuration similar to the one disclosed by Smith in accordance with the

Art Unit: 2142

network disclosed by Soha. It is for this reason that one of ordinary skill in the art would have been motivated to use routers in a forwarding infrastructure.

8. As per claims 6 and 14, in accordance with claims 1 and 9, respectively, Smith discloses a method of receiving upstream statistics by way of a backward trace (p. 497, col. 1, para. 1, lines 6-9). Smith also discloses the method of using this information to redirect or block the path of the undesirable network traffic (p. 496, col. 2, para. 4).

9. As per claims 8 and 16, in accordance with claims 1 and 9, Soha discloses the use of a computer network, but is silent on whether or not the computer network is involved with the Internet. However, Smith discloses a computer network associated with the Internet (p. 493, col.1, para. 1). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the Internet as the computer network as disclosed by Smith in accordance with the statistics gathering network method disclosed by Soha. It is for this reason that one of ordinary skill in the art would have used the Internet as the computer network.

10. As per claims 17 and 19, in accordance with claims 1 and 9, respectively, Smith discloses undesirable network traffic including denial of service attacks (p. 494, col. 2, para. 6 – p. 495, col. 1).

11. As per claims 18 and 20, in accordance with claims 17 and 19, respectively, it would be obvious to one of ordinary skill in the art for the computer network to have service providers. It is deemed inherent for a computer network to have service provider networks.

Art Unit: 2142

12. Claims 4, 5, 7, 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soha (U.S. 4,817,080), hereinafter referred to as Soha, in view of Smith, R. N. et al. ("Operating Firewalls Outside the LAN Perimeter"), hereinafter referred to as Smith, and in further view of Phaal (U.S. 5,315,580), hereinafter referred to as Phaal.

13. As per claims 4 and 12, in accordance with claims 1 and 9, respectively, Soha discloses the use of a network monitoring system in order to gather statistics, but does not disclose specific examples of statistics gathered. However, Phaal discloses a similar network-monitoring device that collects statistics, including flow-based statistics (col. 6, line 48 - col. 7, line 2). It would have been advantageous to one of ordinary skill in the art at the time of applicant's invention to gather statistics based on network flow. It is for this reason that one of ordinary skill in the art would have found it obvious and would have been motivated to gather flow-based statistics.

14. As per claims 5 and 13, in accordance with claims 1 and 9, respectively, Soha discloses the use of packet statistics, but is silent on the use of packet statistics providing information about a set of packets. However, Phaal discloses packet statistics gathering including information about packets entering the network (col. 6, lines 48-61). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize the packet statistics method disclosed by Phaal because there are many types of statistics that can be derived from a single packet (col. 6, lines 48-51). It is for this reason that one of ordinary skill in the art would have been motivated to utilize the packet statistics gathering method disclosed by Phaal.

15. As per claims 7 and 15, in accordance with claims 1 and 9, respectively, Smith teaches the method of reconstructing a path taken by undesirable network traffic, but is silent on extracting profiles from statistics collection. However, Phaal discloses a method of creating profiles from statistics collected by using a traffic matrices (col. 6, line 62 – col. 7, line 2) that can be available for analysis (col. 6, lines 44-47). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to extract profiles in the form of traffic matrices in order to determine how to redirect undesirable network traffic. It is for this reason that one of ordinary skill in the art would have been motivated to utilize the traffic matrices disclosed by Phaal to assist in reconstructing a path taken by undesirable network traffic.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jinzenji et al. (U.S. 6,032,189) disclose a network data distribution system.

Conklin et al. (U.S. 5,991,881) disclose a network surveillance system.

Notess (U.S. 5,231,593) discloses a method of maintaining historical LAN traffic statistics.

Artsy (U.S. 5,701,484) discloses a method of routing objects on action paths in a distributed computing system.

Wolff (U.S. 6,067,545) discloses a method of resource rebalancing in networked computer systems.

Szybicki (U.S. 4,756,019) discloses a method of traffic routing and automatic network management system for telecommunication networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is 703-305-0447. The examiner can normally be reached on Monday-Friday (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached at (703) 305-9705. The fax phone number for the organization where this application or proceeding is assigned is (703)308-5358.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [benjamin.ailes@uspto.gov].



All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Group receptionist whose telephone number is (703)305-3900.

  
JACK B. HARVEY  
SUPERVISORY PATENT EXAMINER

Benjamin Ailes  
Patent Examiner  
Art Unit 2142